Conference on Disarmament

20 June 2014

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Note verbale dated 17 June 2014 from the Permanent Mission of Ireland addressed to the Acting Secretary-General of the Conference on Disarmament transmitting the text of the paper entitled "Multilateral nuclear disarmament verification: applying the principles of irreversibility, verifiability and transparency" submitted by South Africa on behalf of the New Agenda Coalition to the First Session of the Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons[1]

The Permanent Mission of Ireland to the United Nations Office and other international organizations based in Geneva presents its compliments to the Secretary-General of the Conference on Disarmament, and has the honour to transmit herewith the English language version of the paper entitled "Multilateral nuclear disarmament verification: applying the principles of irreversibility, verifiability and transparency" submitted by South Africa on behalf of the New Agenda Coalition to the First Session of the Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons.

The Permanent Mission of Ireland would appreciate it if the paper could be issued as an official document of the Conference on Disarmament and distributed to all member States and non-member participants of the Conference.

[1] Previously issued as document of the Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons under symbol NPT/CONF.2015/PC.I/WP.30 of 26 April 2012 as attached.

Multilateral nuclear disarmament verification: applying the principles of irreversibility, verifiability and transparency

Working paper submitted by South Africa on behalf of Brazil, Egypt, Ireland, Mexico, New Zealand and Sweden as members of the New Agenda Coalition

Perspective

1. At the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, the States parties agreed on a number of practical steps for systematic and progressive efforts to implement article VI of the Treaty and paragraphs 3 and 4 (c) of the 1995 decision entitled "Principles and objectives for nuclear non-proliferation and disarmament". These steps included an unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals and agreement to apply the principle of irreversibility to nuclear disarmament, nuclear and other related arms control and reduction measures. Along with increased transparency by the nuclear-weapon States, the States parties committed themselves to further developing the verification capabilities that would be required to provide assurance of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world. The Conference further agreed that all nuclear-weapon States would place, as soon as practicable, fissile material designated by each of them as no longer required for military purposes under the International Atomic Energy Agency (IAEA) or other relevant international verification to ensure that such material remained permanently outside military programmes.

2. The 2010 Review Conference noted the reaffirmation by the nuclear-weapon States of their unequivocal undertaking to accomplish the total elimination of their nuclear arsenals, and reaffirmed the continued validity of the practical steps agreed to in the Final Document of the 2000 Review Conference. The nuclear-weapon States also committed themselves to accelerating concrete progress on the steps leading to nuclear disarmament. All States parties committed themselves to applying the principles of irreversibility, verifiability and transparency in relation to the implementation of their treaty obligations. In reiterating the agreements reached in 2000, the 2010 Review Conference encouraged the nuclear-weapon States to commit themselves to declaring to IAEA all fissile material designated by each of them as no longer required for military purposes and to place such material as soon as practicable under IAEA or other relevant international verification. In that regard, all States were encouraged to support the development of appropriate legally binding verification arrangements, within the context of IAEA, to ensure the irreversible removal of fissile material designated by each nuclear-weapon State as no longer required for military purposes.

3. Since the entry into force of the Treaty, significant efforts have been made to strengthen the IAEA safeguards system in non-nuclear-weapon States, as required under article III of the Treaty, with a view to preventing the diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. These efforts included the development of comprehensive safeguards agreements, the Model Additional Protocol and integrated safeguards that aim at providing credible assurances regarding the non-diversion of nuclear material from declared activities and the absence of undeclared nuclear material and activities.

4. No similar efforts have been undertaken to strengthen safeguards in the nuclear-weapon States, specifically in support of nuclear disarmament measures, the relevant

commitments made in 2000 and 2010 in this regard notwithstanding. Although the nuclear-weapon States have all signed and ratified additional protocols to their safeguards agreements, which constitute an important political signal, the effect of these arrangements is largely symbolic given the nature of the safeguards agreements currently applied in the nuclear-weapon States.

5. Significantly, article III.B.1 of the IAEA statute requires the Agency to conduct its activities in accordance with the purposes and principles of the United Nations to promote peace and international cooperation, and in conformity with policies of the United Nations furthering the establishment of safeguarded worldwide disarmament and in conformity with any international agreements entered into pursuant to such policies. Furthermore, article III.A.5 provides for the Agency to establish and administer safeguards designed to ensure that special fissionable and other materials, services, equipment, facilities and information made available by the Agency or at its request or under its supervision or control are not used in such a way as to further any military purpose; and to apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement, or at the request of a State, to any of that State's activities in the field of atomic energy. In this context, the IAEA midterm strategy for 2012-2017 stipulates that the Agency must remain ready to assist, in accordance with its statute, with verification tasks under nuclear disarmament or arms control agreements that it may be requested to carry out by the States parties to such agreements.

6. Besides the continuing work on the implementation of the agreement between the Government of the United States of America and the Government of the Russian Federation concerning the management and disposition of plutonium designated as no longer required for defence purposes and related cooperation, no further progress has been made in the development of appropriate legally binding verification arrangements, in the context of IAEA, to strengthen safeguards in the nuclear-weapon States in support of nuclear disarmament measures. Fissile material that has been announced or declared as permanently removed from weapons programmes and/or declared as excess, including material that has been placed under IAEA safeguards can, under the current voluntary offer safeguards applied in the nuclear-weapon States, still be withdrawn from safeguards and used in the development of nuclear weapons. These measures therefore do not give effect to the principles of irreversibility, verifiability and transparency as agreed to at previous Review Conferences and provide no assurances regarding the irreversible removal of fissile material from military programmes, particularly weapons-grade highly enriched uranium and plutonium designated as no longer required for military purposes.

7. The verification of nuclear disarmament measures is an indispensable element in the fulfilment of the nuclear disarmament obligations resulting from article VI of the Treaty. Warhead dismantlement and the verification of fissile material permanently removed from military programmes are therefore important matters that will need to be dealt with as increasing progress is made on the path towards a world free of nuclear weapons. A multilateral verification regime in this context would need to be effective and credible, while respecting the requirement to maintain confidentiality in relation to sensitive weapons design and composition, given the obligations under articles I and II of the Treaty.

8. The present working paper is intended to contribute towards the implementation of the commitment of all States parties under the 2010 action plan to support the development of appropriate legally binding verification arrangements, within the context of IAEA, to ensure the irreversible removal of fissile material designated by each nuclear-weapon State as no longer required for military purposes.

Relevant resolutions, decisions and initiatives

9. Since the General Assembly adopted its first resolution, on 24 January 1946, the international community has recognized the need for the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction and for effective safeguards by way of inspections and other means to protect complying States against the hazards of violations and evasions. The need for nuclear disarmament verification measures is reflected in the large volume of resolutions and decisions adopted by the General Assembly and at the Review Conferences, and in the IAEA statute. The annex to the present working paper contains an indicative list of some of the Treaty decisions that are relevant to the multilateral verification of nuclear disarmament measures.

10. Nuclear disarmament verification has also been the subject of a number of initiatives[2] that can be drawn upon and provide valuable insight into a future multilateral verification system in the context of article VI of the Treaty. An important example is the Trilateral Initiative between the Russian Federation, the United States and IAEA, which was launched in 1996 and suspended in 2002. This initiative, which was one of the practical steps for systematic and progressive efforts to implement article VI of the Treaty agreed upon at the 2000 Review Conference, examined the technical, legal and financial issues associated with IAEA verification of weapon-origin and other fissile material released from military programmes. It was intended to establish a verification system under which States possessing nuclear weapons might submit excess weapon material. Although the specific materials to be declared would be for the States to decide, the decision to submit the material for IAEA verification, once made, would have been irrevocable. Moreover, in keeping with the need for verification, once the decision was made to submit material for IAEA verification, inspections would be obligatory.

11. While only limited information on the Initiative has been publicly released, the Director General of IAEA informed the General Conference at its forty-sixth regular session, in 2002, that the preparatory work under the Trilateral Initiative had been largely concluded and that experts had agreed that the technical solutions developed under that initiative could allow the Agency to verify any form of fissile material without disclosing sensitive information. He also confirmed that preliminary estimates of the verification costs had been made and a legal framework for verification developed.

Further action required

12. In keeping with the decisions taken at the 1995, 2000 and 2010 Review Conferences, in particular as regards the application of the principles of irreversibility, verification and transparency to nuclear disarmament measures, the 2015 Review Conference should agree to the conclusion, within the context of IAEA, of strengthened safeguards and enhanced verification arrangements that would ensure the application of

[2] In a research report published in September 2010 by the Verification Research, Training and Information Centre entitled "Verifying warhead dismantlement: past, present, future", the focus is on an initiative between Norway and the United Kingdom of Great Britain and Northern Ireland on verified warhead dismantlement. In the report, there is also an overview of other relevant efforts and initiatives, including a 1967 joint project between the United States Department of Defense and the United States Arms Control and Disarmament Agency designated "Field Test FT-34", joint Black Sea experiments carried out by United States and Soviet Union scientists during the 1980s, a United States Department of Energy study in 1996-1997 on transparency and verification options to monitor warhead dismantlement and the 1996-2002 Trilateral Initiative between the Russian Federation, the United States and IAEA, in addition to relevant studies conducted in the United Kingdom from 1998 to 2005.

safeguards in perpetuity on material irreversibly removed from nuclear weapons programmes. In this respect, there is an urgent need to develop adequate and efficient nuclear disarmament verification capabilities and legally binding verification arrangements. This could include the negotiation of a new model agreement, protocol or other legally binding arrangements that would apply to all material permanently removed from weapons programmes, which would provide the necessary confidence that such material could not in future be withdrawn or diverted for nuclear weapons purposes. In this context, IAEA should be called upon to take all necessary actions to support the development of new legally binding arrangements and the necessary technical capabilities that would be required for this purpose.

13. While strengthened safeguards and enhanced verification arrangements in furthering the establishment of safeguarded worldwide disarmament will inevitably require additional resources, these tasks should be conducted in a manner that would not jeopardize the fulfilment of the other statutory functions and responsibilities of IAEA or negatively affect the need to maintain an appropriate balance between the promotional and other statutory activities of the Agency.

14. New legally binding multilateral disarmament verification measures should be underpinned by a reaffirmation of a global moratorium on fissile material production for nuclear weapons, pending the conclusion of a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices that should fulfil both nuclear disarmament and nuclear non-proliferation objectives.

15. All nuclear-weapon States must initiate or accelerate the development of multilateral arrangements for placing fissile material no longer required for military purposes, including weapons-grade plutonium and weapons-grade uranium, under IAEA verification and make arrangements for the disposition of such material for peaceful purposes, ensuring that such material remains permanently outside military programmes in a verifiable manner.

16. Consistent with the commitment under action 5 (g) of the 2010 action plan to further enhance transparency and increase mutual confidence, nuclear-weapon States should commit themselves to annually submitting accurate, complete and comprehensive reports on their nuclear arsenals, weapons-grade highly enriched uranium and plutonium stockpiles and production histories, in addition to material irreversibly removed from nuclear weapons programmes, in conformity with all articles of the Treaty, especially articles I and II.

Annex

Decisions related to nuclear disarmament verification

1995 Review and Extension Conference

1. Paragraph 13 of the decision on principles and objectives states that nuclear fissile material transferred from military use to peaceful nuclear activities should, as soon as practicable, be placed under Agency safeguards in the framework of the voluntary safeguards agreements in place with the nuclear-weapon States. Safeguards should be universally applied once the complete elimination of nuclear weapons has been achieved.

2000 Review Conference

2. In paragraph 22 of part I of the Final Document, under the heading "Article III and fourth and fifth preambular paragraphs, especially in their relationship to article IV and the sixth and seventh preambular paragraphs", the Conference recognized that measures to strengthen the effectiveness and improve the efficiency of the safeguards system with a view to providing credible assurance of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear material and activities must be implemented by all States parties to the Non-Proliferation Treaty, including the nuclear-weapon States.

3. In paragraph 29, the Conference underlined the importance of international verification of nuclear material designated by each nuclear-weapon State as no longer required for military purposes that had been irreversibly transferred to peaceful purposes. The Conference supported unilateral offers and mutual initiatives to place excess material under appropriate IAEA verification arrangements. It also called for nuclear materials designated by each of the nuclear-weapon States as no longer required for military purposes to be placed under IAEA or other relevant verification, as soon as practicable.

4. In paragraph 1 of the section entitled "Article IV and sixth and seventh preambular paragraphs", under the heading "Conversion of nuclear materials to peaceful uses", the Conference noted the steps taken by nuclear-weapon States to reduce their nuclear weapons arsenals and underlined the importance of international verification, as soon as practicable, of nuclear weapons material designated by each nuclear-weapon State as no longer required for military programmes and that had been irreversibly transferred to peaceful purposes.

5. In paragraph 15 of part I of the Final Document, under the heading "Article VI and eighth to twelfth preambular paragraphs", the States parties agreed on, among other things, a number of practical steps for the systematic and progressive efforts to implement article VI of the Treaty and paragraphs 3 and 4 (c) of the 1995 decision entitled "Principles and objectives for nuclear non-proliferation and disarmament". Those steps included:

> 5. The principle of irreversibility to apply to nuclear disarmament, nuclear and other related arms control and reduction measures.
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> 6. An unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI.
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> ....
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> 10. Arrangements by all nuclear-weapon States to place, as soon as practicable, fissile material designated by each of them as no longer required for military purposes under IAEA or other relevant international verification and

arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside military programmes.

....

13. The further development of the verification capabilities that will be required to provide assurance of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world.

2010 Review Conference

6. The conclusions and recommendations for follow-on actions adopted at the 2010 Review Conference reaffirmed the decisions of the 1995 and 2000 Review Conferences and, among other things, included agreement on the following actions:

- Action 2: All States parties commit to apply the principles of irreversibility, verifiability and transparency in relation to the implementation of their treaty obligations.
- Action 3: In implementing the unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals, the nuclear-weapon States commit to undertake further efforts to reduce and ultimately eliminate all types of nuclear weapons, deployed and non-deployed, including through unilateral, bilateral, regional and multilateral measures.

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- Action 5: The nuclear-weapon States commit to accelerate concrete progress on the steps leading to nuclear disarmament, contained in the Final Document of the 2000 Review Conference, in a way that promotes international stability, peace and undiminished and increased security. To that end, they are called upon to promptly engage with a view to, inter alia:

  (a) Rapidly moving towards an overall reduction in the global stockpile of all types of nuclear weapons, as identified in action 3;

  ...

  (g) Further enhance transparency and increase mutual confidence.

  ...

- Action 16: The nuclear-weapon States are encouraged to commit to declare, as appropriate, to the International Atomic Energy Agency (IAEA) all fissile material designated by each of them as no longer required for military purposes and to place such material as soon as practicable under IAEA or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside military programmes.
- Action 17: In the context of action 16, all States are encouraged to support the development of appropriate legally binding verification arrangements, within the context of IAEA, to ensure the irreversible removal of fissile material designated by each nuclear-weapon State as no longer required for military purposes.